

SEAT No. _____

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SARDAR PATEL UNIVERSITY

T.Y.B.sc. VTH SEMESTER EXAMINATION DEC., 2020

BIOCHEMISTRY: USO5CBCH22

TITLE: ENZYMOLOGY

Date: 26 / 12 / 2020 ~~Saturday~~ Time: 2 :00 PM TO 4 :00 PM TOTAL MARKS: 70

Q.1 Select proper option from following MCQ. [10]

- 1) -----are organic compound and bind tightly to the apo-enzyme.
a) co-enzyme b) co-substrate c) co-substrate d) prosthetic group
- 2) Non proein part of enzyme is _____.
a) isoenzyme b) apoenzyme c) holoenzyme d) co-enzyme
- 3) The rate of enzyme reaction is directaly proportional to all of following except.
a) enzyme concⁿ b) sub concⁿ c) optimum temp d) product concⁿ
- 4) TPP transferentity as a coenzyme
(a) aldehydes b) amino group c) hydrogen d) electron
- 5) Normal serum LDH activity ranges from -----IU/L
a) 5 to 50 b) 50 to 60 c) 60 to 250 d) 250 to 350
- 6) S-LDH levels are raised in _____.
a) carsinomatosi s b) acute leukaemias
c) granulocytic leukaemia d) all of these
- 7) -----represent the strength of binding
a) Km b) V max c) S₀ d) V₀
- 8) High km value indicate _____ affinity.
a) low b) high c) no effect d) all of these
- 9) the number of enzyme units present per milligram of protein is _____
a) specific activity b) turnover number c) katal d) IU
- 10) _____ is that concⁿ of substrate at which the half active sites of enzyme are filled
a) Km b) Vmax c) s₀ d) v₀

Q2. Fill in the blanks and true false

[8]

1. Biotine acts as a co-enzyme for _____.
2. _____ enzymes possess addition sites besides the active site
3. _____ inhibitors often resemble the substrate may compete for same binding site
4. low Km value indicate _____ affinity

True or false

5. Enzymes are protein biocatalysts
6. LDH enzyme is relatively non-specific for myocardial tissue.
7. S-LDH level >1500 IU/L in acute myocardial infarction suggest a grave prognosis.
8. IU is the substrate concentration at which the half max velocity.

Q3. Answer in short. (Any ten)

[20]

1. Define enzyme and coenzyme
2. Define activator
3. Define holo enzyme.
4. Define enzyme turnover number
5. Define isoenzyme
6. Define allozymes.
7. What is K_m and V_{max} ?
8. Define IU and katal.
9. Define Apzyme
10. What is ribozyme?
11. What is feedback inhibition?
12. What is modulators?

Q4.: Long answer questions. (any four) (8 marks each)

[32]

1. Write role of co-enzyme in enzyme catalysis.
2. Explain various factors affecting enzyme activity.
3. Write short note on classification of enzyme.
4. Explain: lock and key model and koshlands theory
5. Write in detail about uncompetitive inhibition.
6. Write in detail about noncompetitive inhibition.
7. Write industrial application of enzymes.
8. Explain in detail phosphofructokinase.